

## **REMARKS**

### **Status of Claims in Application.**

Claims 1-40 are active in this application. The Examiner has rejected Claims 1, 17, 18, 26, 30, 34, and 38 and their dependents under 35 U.S.C. § 112, First Paragraph and Claims 1, 4-10, 13-17, and 23-29 under 35 U.S.C. § 102(b). Reconsideration is respectfully requested.

### **Rejection of Claims 1, 17, 18, 26, 30, 34, and 38 under 35 U.S.C. § 112, First Paragraph**

The Examiner has rejected Claims 1, 17, 18, 26, 30, 34, and 38 and their dependents under 35 U.S.C. § 112, First Paragraph as failing to comply with the written description requirement.

#### **Rejection of Claims 1, 17, and 26.**

With respect to “less than or equal to 10 volume percent” in Claim 1, 17, and 26, the Applicants respectfully note that the Specification as filed contained Table 8: Phase I Gasoline-Oxygenate Blend Recipes, that is reprinted herein:

**TABLE 8: PHASE I GASOLINE-OXYGENATE BLEND RECIPES**

<b>BLEND</b>	<b>EtOH</b>	<b>C4</b>	<b>FFB</b>	<b>RAFF</b>	<b>HOR</b>	<b>TOL</b>	<b>LCC</b>	<b>ALKY</b>	<b>LSCC</b>	<b>HCC</b>
	(in terms of volume percent of the total blend) (%)									
<b>A1</b>	9.50	0.00	1.27	0.00	20.72	17.92	8.05	42.54	0.00	0.00
<b>A2</b>	5.42	0.0	1.3	0.0	21.7	18.7	8.4	44.5	0.0	0.0
<b>B2</b>	9.50	0.00	0.00	15.39	16.20	9.41	0.00	23.89	10.59	15.02
<b>B2</b>	5.42	0.0	0.0	16.1	16.9	9.8	0.0	25.0	11.1	15.7
<b>C1</b>	9.50	1.45	0.00	0.00	14.93	27.60	13.39	33.12	0.00	0.00
<b>C2</b>	5.42	1.5	0.0	0.0	15.6	28.8	14.0	34.6	0.0	0.0
<b>D1</b>	9.50	0	0	15.7	24.8	0	12.8	15.7	18.6	2.9
<b>D2</b>	5.42	0.0	0.0	16.5	25.9	0.0	13.3	16.5	19.4	3.0
<b>E1</b>	9.50	0.00	0.00	22.63	25.25	0.00	0.00	15.84	16.83	9.86

BLEND	EtOH	C4	FFB	RAFF	HOR	TOL	LCC	ALKY	LSCC	HCC
	(in terms of volume percent of the total blend) (%)									
E2	5.42	0.0	0.0	23.6	26.4	0.0	0.0	16.6	17.6	10.3
F1	9.50	0.00	0.00	9.14	9.23	32.85	16.47	22.81	0.00	0.00
F2	5.42	0.0	0.0	9.6	9.6	34.3	17.2	23.8	0.0	0.0
G1	9.50	0.09	3.35	0.00	34.39	7.15	9.50	35.93	0.00	0.00
G2	5.42	0.1	3.5	0.0	35.9	7.5	9.9	37.5	0.0	0.0
H	9.50	0.00	0.00	12.49	15.48	0.00	0.09	25.61	18.55	18.19
I1	9.50	0.00	1.81	19.10	8.78	19.28	11.31	9.68	20.54	0.00
I2	5.42	0.0	1.9	20.0	9.2	20.1	11.8	10.1	21.5	0.0
J1	9.50	0.00	1.45	0.00	31.77	9.59	12.94	32.67	0.00	2.08
J2	5.42	0.0	1.5	0.0	33.2	10.0	13.5	34.1	0.0	2.2
K1	9.50	0.00	0.00	20.27	17.47	13.39	7.24	20.72	10.05	1.36
K2	5.42	0.0	0.0	21.2	18.3	14.0	7.6	21.7	10.5	1.4
L1	9.40	0.00	0.00	23.47	16.13	7.34	13.32	10.87	17.03	2.54
L2	5.42	0.0	0.0	24.5	16.8	7.7	13.9	11.3	17.8	2.6
M	9.50	0.00	0.00	11.67	19.10	0.18	9.96	20.27	17.20	12.13
N	9.72	0.00	0.72	18.33	4.15	23.20	17.42	0.00	17.33	9.21
O1	9.79	0.00	2.71	0.00	20.57	15.97	9.11	36.26	0.00	5.68
O2	5.42	0.0	2.8	0.0	21.6	16.7	9.6	38.0	0.0	6.0
P	9.72	0.00	0.00	15.98	0.00	19.23	6.68	19.41	15.80	13.27
Q1	9.64	0.00	0.00	17.80	4.70	14.64	3.34	12.83	18.61	18.52
Q2	5.42	0.0	0.0	18.6	4.9	15.3	3.5	13.4	19.5	19.4
R1	9.59	0.00	0.00	20.52	17.36	5.33	7.23	5.79	23.87	10.22
R2	5.42	0.0	0.0	21.5	18.2	5.6	7.6	6.1	25.0	10.7
S1	9.69	0.00	0.99	11.56	0.00	26.55	14.54	36.76	0.00	0.00
S2	5.42	0.0	1.0	12.1	0.0	27.8	15.2	38.5	0.0	0.0
T	9.66	0	0	13.5	15.3	4.2	15.4	12.3	26.6	3.3
U	9.66	0	0	4.2	12.8	15.7	7.5	32.2	0	17.9
V	9.81	0	0	19.1	13.3	0	0	17.2	26.8	13.7
W	9.67	0	0	0	32	11.8	26.7	19.7	0	0
X	9.65	0	0	9.7	0	0.4	0.73	34.5	24	21.1

*Application*, pp. 20-21. Of note, these blends show “an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent” as labeled EtOH column in this example. As shown, the EtOH or alcohol content of samples A1-X contain an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume

percent.

Similarly, Applicants respectfully note that the Specification as filed contained Table 13:  
Phase II Gasoline-Oxygenate Blend Recipes, that is reprinted herein:

**TABLE 13: PHASE II GASOLINE-OXYGENATE BLEND RECIPES**

BLEND	EtOH	C4	FFB	RAFF	HOR	TOL	LCC	ALKY	LSCC	HCC
	(in terms of volume percent of the total blend) (%)									
AA	9.750	0.0	4.1	13.3	14.0	24.0	0.0	34.9	0.0	0.0
BB	9.900	0.0	0.0	18.2	17.6	0.0	18.7	13.7	19.7	2.3
CC	9.680	0.0	0.0	16.4	30.3	0.2	0.0	24.6	1.4	17.3
DD1	9.610	0.0	1.5	0.1	11.6	16.5	19.6	35.2	6.1	0.0
DD2	5.420	0.0	1.6	0.1	12.1	17.2	20.5	36.8	6.3	0.0
EE1	9.450	0.0	0.2	2.2	2.1	24.8	22.9	36.6	1.8	0.0
EE2	5.420	0.0	0.2	2.3	2.2	25.9	23.9	38.2	1.9	0.0
FF	9.640	0.4	0.0	20.6	30.5	0.0	1.5	16.0	8.0	13.4
GG	9.560	0.0	4.4	6.4	15.7	35.2	16.4	12.3	0.0	0.0
HH	9.910	0.8	0.2	21.2	36.7	0.2	4.1	4.8	13.2	8.9
II	9.760	0.0	2.0	2.9	34.9	12.4	15.2	21.7	0.0	1.3
JJ	9.660	0.0	0.0	25.2	0.1	18.6	15.0	12.3	19.2	0.0
KK1	9.620	0.0	0.6	5.3	4.2	28.6	20.2	31.6	0.0	0.0
KK2	5.420	0.0	0.7	5.6	4.4	29.9	21.1	33.1	0.0	0.0

*Application*, p. 27. Of note, these blends show “an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent” as labeled EtOH column in this example. As shown, the EtOH or alcohol content of samples AA-KK2 contain an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent.

Accordingly, there is support for the limitation of this range in Claims 1, 17, 26, and their dependencies. The tables include sufficient data regarding the alcohol content to show that the

Applicants were in possession of the invention. A written description of the invention is set forth in the specification and a reconsideration of the failure to do so is respectfully requested.

### **Rejection of Claim 18.**

With respect to the requirement of a “benzene content of the blend is greater than 0.27 volume percent” in Claim 18 and its dependencies, the Applicants note that in Table 10: Additional Phase I Gasoline-Oxygenate Blend Properties, Blend X contains a 0.27 Volume Percent Benzene. The Table from the specification is reprinted below:

**TABLE 10: ADDITIONAL PHASE I GASOLINE-OXYGENATE BLEND PROPERTIES**

<b>Blend</b>	<b>Oxy Wt%</b>	<b>Benz Vol%</b>	<b>Sulfur PPMW</b>	<b>Olef Vol%</b>	<b>Arom Vol%</b>	<b>NOxR % Red</b>	<b>ToxR % Red</b>	<b>VOCR % Red</b>
<b>A1</b>	3.54	0.53	23	1.41	23.25	15.7	40.4	47.5
<b>A2</b>	2.02	0.55	24	1.47	24.30	15.8	39.5	43.9
<b>B1</b>	3.49	0.58	197	2.90	25.01	7.2	34.5	39.5
<b>B2</b>	1.99	0.61	206	3.03	26.14	7.1	33.1	35.9
<b>C1</b>	3.47	0.53	34	2.31	33.89	13.5	35.2	44.6
<b>C2</b>	1.98	0.55	36	2.41	35.41	13.1	32.7	37.8
<b>D1</b>	3.56	0.71	80	3.68	23.75	12.1	33.4	33.8
<b>D2</b>	2.03	0.75	84	3.85	24.83	12.0	32.8	31.1
<b>E1</b>	3.58	0.68	143	1.92	24.34	9.3	33.2	37.4
<b>E2</b>	2.04	0.71	149	2.01	25.43	9.4	32.6	37.2
<b>F1</b>	3.48	0.63	70	4.61	32.97	11.4	34.3	45.6
<b>F2</b>	1.99	0.66	73	4.82	34.46	11.7	32.3	45.6
<b>G1</b>	3.46	0.67	36	2.10	25.73	14.1	36	39.8
<b>G2</b>	1.97	0.70	38	2.20	26.89	14.4	35.4	41.3
<b>H</b>	3.55	0.52	261	4.30	16.76	7.5	36.8	39.3
<b>I1</b>	3.52	0.70	68	3.08	31.08	11.5	32.1	37.8
<b>I2</b>	2.01	0.73	71	3.21	32.48	11.6	30.9	36.1
<b>J1</b>	3.53	0.85	83	3.79	28.20	11.5	31.8	41.7
<b>J2</b>	2.01	0.89	87	3.96	29.47	11.6	29.9	39.0
<b>K1</b>	3.54	1.05	106	2.38	24.83	10.5	29.9	36.6
<b>K2</b>	2.02	1.10	111	2.49	25.95	10.6	29.3	40.4
<b>L1</b>	3.45	0.69	108	2.82	27.83	9.9	33.6	39.9

Blend	Oxy	Benz	Sulfur	Olef	Arom	NOxR	ToxR	VOCR
	Wt%	Vol%	PPMW	Vol%	Vol%	% Red	% Red	% Red
L2	1.99	0.72	113	2.94	29.06	9.7	32.7	38.2
M	3.50	0.77	215	4.70	26.14	6	30.3	37.6
N	3.51	0.78	247	7.39	31.62	3.2	27.1	35.6
O1	3.59	0.64	116	3.99	28.50	9.9	33.8	37.5
O2	1.99	0.67	122	4.18	29.88	9.8	32.4	36.4
P	3.56	0.51	213	3.06	25.15	6.2	35.8	38.3
Q1	3.50	0.69	260	1.15	30.83	3.9	28.2	36.7
Q2	1.97	0.73	272	1.21	32.27	3.7	26.3	33.6
R1	3.54	0.85	177	4.55	27.11	7.1	28.8	33.3
R2	2.00	0.89	185	4.76	28.36	7.1	27.5	32.6
S1	3.59	0.56	88	4.20	23.60	11.8	39.1	38.7
S2	2.01	0.59	92	4.40	24.71	11.8	37.7	36.5
T	3.54	0.73	128	2.11	28.15	9.3	31.4	38.3
U	3.54	0.49	250	4.86	25.18	5.3	35.3	39.2
V	3.61	0.64	177	3.32	22.57	8.4	34.1	37.4
W	3.50	0.81	110	5.41	33.39	9.1	29.9	38.3
X	3.58	0.27	286	5.92	32.65	2.7	32.4	35.2

*Application*, pp. 24-25. Accordingly, there is support for the limitation of this range in Claim 18 and its dependencies. The table includes sufficient data to show that the Applicants were in possession of the invention and provided a written description of same; accordingly a reconsideration is respectfully requested.

#### **Rejection of Claim 30.**

With respect to the requirement of a “the aromatic content of the blend is greater than 16.76 volume percent” in Claim 30 and its dependencies, Applicants note that in Table 10: Additional Phase I Gasoline-Oxygenate Blend Properties, Blend H contains an aromatic content of the blend of 16.76 volume percent is disclosed. The Table was reprinted above.

Accordingly, there is support for the limitation of this range in Claim 30 and its

dependencies. The table includes sufficient data to show that the Applicants were in possession of the invention and provided an adequate description; accordingly a reconsideration is respectfully requested.

#### **Rejection of Claim 34.**

With respect to the requirement of “the olefin content of the blend is greater than 1.15 volume percent” in Claim 34 and its dependencies, the Applicants note that in Table 10: Additional Phase I Gasoline-Oxygenate Blend Properties, Blend Q1 contains an olefin content of 1.15 volume percent. The Table was reprinted above.

Accordingly, there is support for the limitation of this range in Claim 34 and its dependencies. The table includes sufficient data to show that the Applicants were in possession of the invention. Reconsideration is respectfully requested

#### **Rejection of Claim 38.**

With respect to the requirement of “a Dry Vapor Pressure Equivalent greater than or equal to 5.3 PSI” in Claim 38 and its dependencies, the Applicants note that in Table 12: Phase II Neat Blend Recipes Properties, Blends BB and CC contain a Dry Vapor Pressure Equivalent of 5.3 PSI. This limitation is also disclosed. The Table is reprinted below.

**TABLE 12: PHASE II NEAT BLEND RECIPES PROPERTIES**

Blend	RON	MON	(R+M)/2	DVPE	T10	T50	T90	EP	E200	E300
				PSI	°F	°F	°F	°F	Vol. %	Vol. %
<b>AA</b>	96.5	87.5	92.0	5.5	156.3	224.5	308.5	387.0	30.5	88.0
<b>BB</b>	88.1	81.9	85.0	5.3	145.4	213.7	342.0	415.5	42.9	79.1
<b>CC</b>	90.7	83.6	87.2	5.3	150.6	214.7	327.7	406.2	40.0	83.1
<b>DD</b>	96.3	87.7	92.0	5.5	151.4	222.6	308.3	398.3	33.1	88.1
<b>EE</b>	96.6	87.9	92.3	5.5	159.0	217.1	277.0	375.7	33.9	92.1

<b>FF</b>	89.8	82.5	86.2	5.5	145.9	218.4	336.0	414.6	40.2	79.9
<b>GG</b>	97.2	86.8	92.0	5.5	153.8	228.1	303.9	386.3	29.9	88.8
<b>HH</b>	89.0	81.8	85.4	5.5	146.3	231.5	340.8	416.3	36.9	75.1
<b>II</b>	96.4	87.2	91.8	5.5	152.7	231.4	323.4	393.0	30.3	83.2
<b>JJ</b>	88.4	81.9	85.2	5.4	150.1	213.0	322.6	414.5	41.1	85.4
<b>KK</b>	96.6	87.0	91.8	5.4	159.9	218.4	281.2	374.0	32.8	92.1

*Application*, p. 26.

Accordingly, support for the limitation of this range in Claim 38 and its dependencies is present in the specification. The table includes sufficient data to show that the Applicants were in possession of the invention and disclosed same; accordingly a reconsideration is respectfully requested

**Rejection of Claims 1, 4-10, 13-17, and 23-29 under 35 U.S.C. § 102(b).**

The Examiner has rejected Claims 1, 4-10, 13-17, and 23-29 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,679,117 (*Jarvis*). This ground for rejection is respectfully traversed. *Jarvis* simply does not disclose an RVP of less than about 7.2 PSI as required by Claims 1, 4-10, 13-17 and 23-29. While *Jarvis* discloses a “final product” containing ethanol having a vapor pressure of 6 to 8 PSI, the products illustrated in *Jarvis* are *not* pump gasolines having a PSI within the claimed range of Applicants. As previously stated, the minimum RVP of the “final liquid product 60” of column 5 of *Jarvis* containing 53.03 vol. % butane and 42.75 vol. % ethanol, is approximately 37.16. See Declaration of Charles A. Lieder, Ph.D. Under 37 CFR § 1.132. The “high octane gasoline” prepared by adding 20% by volume of final liquid product 60 to 80 octane gasoline as disclosed by *Jarvis* would at-best have a RVP of 7.4. Though

Applicants note that lines 24-28 of column 5 of *Jarvis* describe a “resulting mixture” as having a “vapor pressure in the range of 4 to 19 pounds per square inch,” the theoretical RVP of the mixture could not be between 4 to 7.4. *See* paragraph 6 of Leider Declaration. The theoretical RVP for the product containing one half of natural gasoline and one half of ethanol, described in lines 65-67 of column 5 of *Jarvis*, would at best be 16.66 PSI. It technically could not have a “vapor pressure of 1.5 to 8.0 psi” as reported in lines 65-67 of column 6 of *Jarvis*. *See* paragraph 8 of Leider Declaration.

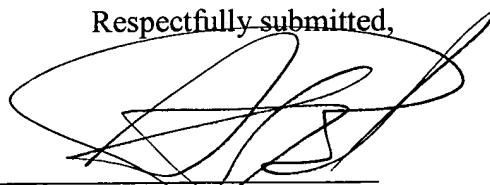
Furthermore, the alcohol content of the “final product” in *Jarvis* is not disclosed. Though a contestable RVP is listed for this final product, all of the rejected claims also recite an alcohol content. Claim 1 recites “an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent.” Claim 26 recites “an alcohol content less than or equal to 10 volume percent.” Claims 10 and 23 recite “an alcohol content greater than about 5.0 volume percent.” Though *Jarvis* discloses alcohol contents of intermediate products, it fails to provide disclosure of an alcohol content of the “final product” that the Examiner claims anticipate the claims of the present application. For this additional reason, reconsideration of the Section 102 rejection is respectfully requested.



### **CONCLUSIONS**

In view of the foregoing amendments and remarks, Applicants respectfully request the Examiner to issue a Notice of Allowance. The Examiner is invited to telephone the undersigned should it be deemed prudent to expedite examination of this application.

Respectfully submitted,



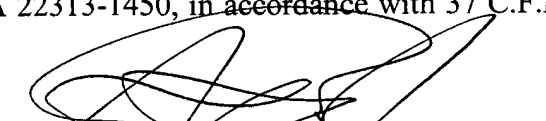
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Steven S. Boyd